

Attorney Docket No. 10559-228001
Serial No. 09/608,307
Amendment dated March 8, 2004
Reply to Office Action dated December 8, 2003

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

A1

1. (Currently amended) A routing system comprising:
a switch configured to switch network packets and to
associate virtual protocol information with the packets; and
a controller, separate from the switch, ~~configured to~~
~~control the switch~~ and connected to receive a packet from the
switch ~~using a~~ and to use said virtual protocol information to
route the packet and to remove said virtual protocol
information, said packet being, providing packet information in
a same format that operates as if the switch were located in the
controller.

~~2-3. (Cancelled)~~

4. (Original) The routing system of claim 1 wherein the
switch has interfaces, each interface corresponding to a virtual
interface in the controller.

5. (Currently amended) The routing system of claim 4
wherein the switch includes a routing mechanism which sends

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~~packets received by an interface of the switch is sent to the a~~
corresponding virtual interface of the controller.

6. (Currently amended) The routing system of claim 1 comprising multiple switches and wherein the controller is configured to control each of the multiple switches.

7. (Original) The routing system of claim 1 further comprising a network medium between the switch and controller.

8. (Original) The routing system of claim 7 wherein the network medium comprises Ethernet.

9. (Original) The routing system of claim 1 wherein the controller comprises a networking stack for receiving and processing the packet.

10. (Currently amended) A routing system comprising:
a switch configured to switch network packets; and
a controller, separate from the switch, and configured to control the switch and to associate virtual protocol information to the packets and connected to transmit a packet through the

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switch using a protocol that operates as if the switch were located in the controller.

11. (~~Cancelled~~)

12. (~~Currently~~ amended) The routing system of claim ~~11~~ 10 wherein the switch is arranged to strip the address information associated with the switch from the packet received from the controller.

13. (Original) The routing system of claim 10 wherein the switch has interfaces, each interface corresponding to a virtual interface in the controller.

14. (Original) The routing system of claim 13 wherein the packet from a virtual interface in the controller is sent to the corresponding interface of the switch.

15. (Original) The routing system of claim 10 comprising multiple switches and wherein the controller is configured to control the switches.

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16. (Original) The routing system of claim 10 wherein the switch and the controller communicate through a network medium.

17. (Original) The routing system of claim 16 wherein the network medium comprises Ethernet.

18. (Original) The routing system of claim 10 wherein the controller comprises a networking stack for transmitting the packet.

19. (Currently ~~amended~~) A method of routing a packet comprising:

sending a network packet to a first ~~routing~~ component of a router;

encapsulating the packet with address information at said first component;

sending the encapsulated packet from the first component to a second ~~routing~~ component of the router, separate from the first component, based on the address information; and

unencapsulating the packet at the second component.

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20. (Original) The method of claim 19 further comprising:
sending the packet up a networking stack to a networking
application.

21. (Original) The method of claim 19 wherein the first
component comprises a switch and the second component comprises
a controller.

22. (Currently amended) The method of claim 21 further
comprising:

in the switch, looking up a routing table to determine the
address of the controller before sending the packet to the
controller.

23. (Original) The method of claim 19 wherein the first
component comprises a controller and the second component
comprises a switch.

24. (Original) The method of claim 23 further comprising:
looking up a routing table to determine the address of the
switch before sending the packet to the switch.

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25. (~~Currently~~ amended) An article comprising a computer-readable medium that stores computer-executable instructions for causing a computer system to:

send a packet to a first ~~router~~ component of a router;

encapsulate the packet with address information in said first component;

send the an encapsulated packet to a second router component separate from said first component based on the address information; and

unencapsulate the packet at the second component.

26. (Original) The article of claim 25 further causing the computer system to:

send the packet up a networking stack to a networking application.

27. (Original) The article of claim 25 wherein the first component comprise a switch and the second component comprises a controller.

28. (Original) The article of claim 27 further causing the computer system to:

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look up a routing table to determine the address of the controller before sending the packet to the controller.

29. (Original) The article of claim 25 wherein the first component comprises a controller and the second component comprises a switch.

30. (Original) The article of claim 27 further causing the computer system to:

look up a routing table to determine the address of the switch before sending the packet to the switch.
